

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Norfolk Division**

UNITED STATES OF AMERICA

v.

Case No. 2:16cr130

ANTONIO SIMMONS, *et al.*,

Defendants.

REPORT AND RECOMMENDATION

This matter arises from a Second Superseding Indictment filed on August 23, 2017 (“the Indictment”), wherein it is alleged that Defendants Antonio Simmons (“Defendant Simmons”), Nathaniel Tyree Mitchell (“Defendant Mitchell”), and Malek Lassiter (“Defendant Lassiter”) (“collectively “Defendants”) are members of the Nine Trey Gangsters (“NTG”), reportedly a criminal street gang that is part of the “United Blood Nation,” a collective of East Coast-based Bloods gangs, which the Indictment alleges is a racketeering enterprise engaged in acts of murder, maiming, assault with firearms, and narcotics distribution. Specifically, the Indictment (ECF No. 121) charges Defendants with thirty-eight (38) counts related to their alleged participation in the affairs of NTG from the Fall of 2010 until August 23, 2017, to include a pattern of racketeering and individual, substantive crimes, punishable under various federal statutes, including the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. § 1961 *et seq.* (“RICO”) and Violent Crimes in Aid of Racketeering statute (“VICAR”).

Before the Court is Defendant Mitchell’s Motion to Exclude Bullets and Shell Casings (ECF No. 137) which requires disposition prior to jury trial on February 6, 2018. This matter was referred to the undersigned United States Magistrate Judge for a Report and

Recommendation pursuant to a Referral Order from the United States District Judge. ECF No. 225; *see also* 28 U.S.C. § 636(b)(1)(B); Fed. R. Civ. P. 72(b); E.D. Va. Local Civ. R. 72. On December 11, 2017, the Court held a hearing on the instant motion at which Andrew Bosse, Assistant United States Attorney appeared on behalf of the United States of America (“the Government”). Ms. Laura Tayman appeared on behalf of Defendant Simmons. Mr. Lawrence Woodward and Ms. Emily Munn appeared on behalf of Defendant Mitchell. Mr. Jason Dunn appeared on behalf of Defendant Lassiter. The Government offered the testimony of its firearm and toolmark expert witness, Ms. Therese Moynihan, Virginia Department of Forensic Science firearms and toolmark examiner (“Ms. Moynihan”). During the hearing, Ms. Moynihan was subject to direct examination by the Government, cross examination by Defendants, and questioning by the Court. At the conclusion of the hearing, the Court instructed the parties to order a transcript (ECF No. 264) and to file supplemental briefing on the issue. ECF No. 256. On December 22, 2017, Defendants filed their Joint Post-Hearing Brief, ECF No. 266, to which the Government filed its Response on January 3, 2018, ECF No. 282. For the foregoing reasons, the undersigned **RECOMMENDS** that Defendant Mitchell’s Motion to Exclude Bullets and Shell Casings (ECF No. 137) be **DENIED**.

I. Motion to Exclude Bullets and Shell Casings (ECF No. 137)

Defendant Mitchell seeks the preclusion of Government evidence in the form of bullets and shell casings on the basis that the toolmark examination evidence is unreliable.¹ At trial, the Government seeks to offer Ms. Moynihan as an expert in firearms and toolmark examination, who will testify that the bullets and shell casings recovered from numerous crime scenes in this

¹ In the Referral Order (ECF No. 225), the Motions to Adopt (ECF Nos. 149/168) filed by Co-Defendant Simmons and Co-Defendant Lassiter were referred to the undersigned. However, these Motions to Adopt (ECF Nos. 149/168) were subsequently granted by the December 14, 2017 Order entered by the District Judge. *See* ECF No. 263.

case were fired from the Glock .40 recovered from Co-Defendant Anthony Derrell Foye (“Co-Defendant Foye”) and from a second, “as yet unrecovered” .380 handgun that the Government alleges was used by Defendant Mitchell in the commission of offenses charged in the Second Superseding Indictment. *See* ECF No. 186 at 1, 10.

As previously noted, during the December 11, 2017 hearing, the Government presented the live testimony of Ms. Moynihan, a certified toolmark and firearm toolmark examiner employed by the Virginia Department of Forensic Sciences (“DFS”). In addition, Ms. Moynihan’s testimony was aided by a PowerPoint presentation which included extensive background material illustrating and animating the mechanics of semiautomatic handguns, and focusing on the elements of the firing mechanism which produce the toolmarks at issue in the instant Motion to Exclude. Ms. Moynihan’s testimony supplemented the background information presented by both parties regarding the history and explanation of the technical field of firearms and toolmark examination.

A. Background

The Court finds it necessary to provide some introductory context to the instant Motion by way of abbreviated background. In toolmark identification, the primary objective is to relate one physical object with another by determining if a toolmark was made by a particular implement. Firearm toolmark examination is a subsection of toolmark examination and compares bullets with bullets and cartridge cases with cartridge cases. In the context of firearms, a toolmark is the physical mark that results when the hard internal elements of a firearm make contact with a relatively softer object (the lead and brass that comprise the components of ammunition, namely, a bullet and shell casing). When a bullet is fired from a semiautomatic handgun, identifiable marks (such as striations and impressions) are produced on the bullets and

the shell casings by the firing mechanism (the propulsion of the bullet and casing through the barrel), on the primer of the bullet by the firing pin ignition process, and on the shell casings by the extractor. The work of a firearm toolmark examiner is to analyze these physical markings on bullets and shell casings to determine whether “sufficient agreement” exists between the identifiable types of physical characteristics that ammunition was fired by the same firearm. This theory of identification is promulgated by the Association of Firearm and Toolmark Examiners (“ATFE”)². *See* ECF No. 264 at 107:2-8. *See also* ECF No. 264 at 50:15-23 (“[T]he theory of identification is the theory that underlies the entire field. And it basically is saying that opinions of common origin or that two tool marks were produced by same tool can be made when the marks present within that toolmark are in sufficient agreement.”). Sufficient agreement describes a situation when the agreement in individual characteristics exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools (known non-match) and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool (known match). The statement that sufficient agreement exists between two toolmarks means that the agreement of individual characteristics is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility. ECF No. 186 at 5-6 (citing AFTE Journal, Volume 43, No. 4, Fall 2011 at 287). *See also* ECF No. 264 at 52:1-11 (“So per the theory, sufficient agreement is significant when doing a comparative examination of two toolmarks. So let’s say I’m comparing two bullets to one another. I’m comparing those unique ridges, furrows, the height, the width, the depth of those peaks and furrows, as well as their spatial relationship on the bullet themselves. And all of that makes up a pattern on a land impression, say, of a bullet. So I’m comparing the unique pattern on one bullet to the pattern on a second bullet to determine if those

² *See* ECF No. 264 at 25:11-15.

patterns bear agreement that is sufficient to call them -- or to say that they were identified as having been produced by the same firearm.”). As previously noted, this ATFE theory of identification and determination of “sufficient agreement” involves assessing the physical characteristics of various marks imprinted on ammunition components. Firearm toolmark examiners are trained to recognize and evaluate the following three types of characteristics: (1) class characteristics; (2) subclass characteristics; and (3) individual characteristics. The first type, “class characteristics,” such as caliber, number of land and grooves, etc., are predetermined during the manufacturing process. For a fired bullet, class characteristics include the number of land and groove impressions, the direction of twist of the land and groove impressions, and the width of the land and groove impressions. For a fired cartridge case, class characteristics are typically limited to the firing pin impression on the primer, which can appear in various shapes, including circular, rectangular, hemispherical, and elliptical shapes, and to the shape of the firing pin aperture and the type of breech face impression, which can be in different shapes and orientations, e.g., arched, circular, parallel, etc. These are measurable features of a specimen that indicate a restricted group source. They result from design factors and are determined prior to manufacture. *See* ECF No. 186 at 3-4 (citing AFTE Glossary, 6th ed.). An example of a “class characteristic” is that a Glock pistol leaves an oval firing pin impression on a cartridge case, as opposed to a round or circular firing pin impression. Thus, when a firearm toolmark examiner observes an oval firing pin impression on a cartridge, he or she can conclude that the bullet was fired by a Glock. *See* ECF No. 264 at 39:25 to 40:1-12. Regarding the second type, “sub-class characteristics,” Ms. Moynihan testified that

sub-class characteristics are more restrictive than class characteristics in that they may be produced by a tool in a certain state of wear. And they are of concern to the firearm and toolmark examiner because they can be produced over multiple tools. What you’re seeing on the bottom left here is a Smith & Wesson firing pin.

What we know about the way Smith & Wesson produces their firing pins is that they're cast in a mold. So let's assume that the same mold was used to cast 100 firing pins. You would expect that those firing pins would bear the same marks because they're cast in the same mold.

ECF No. 264 at 50:15-23. *See also* ECF No. 186 at 4 (“These characteristics typically exist within a particular production run in the manufacturing process and occasionally arise from (1) imperfections in a machine tool that persist during the production of multiple firearm components; or (2) extreme hardness differences between the machine tool and the workpieces.”). As Ms. Moynihan noted during her hearing testimony, “[w]e have to have agreement of all class characteristics in order to move on to the comparison of individual characteristics.” ECF No. 264 at 104:24-25 to 105:1. With respect to the third and final type of characteristics, “[a]n individual characteristic is a random microscopic imperfection that is produced incidental or accidentally by the manufacturer during the manufacturing process. Again, they're random, microscopic and can be used to individualize a toolmark to a tool.” ECF No. 264 at 45:10-14. “Using this methodology for examining toolmarked surfaces, there are four conclusions that examiners reach when conducting an examination: (1) identification, (2) inconclusive, (3) elimination, and (4) unsuitable for comparison.” ECF No. 186 at 7. *See also* ECF No. 264 at 63:8-12 (testifying that the three conclusion options are identification, exclusion or inconclusive). Courts that have accepted toolmark examination testimony often require that if an identification conclusion was reached, that conclusion cannot be presented to the jury unless it was verified by an independent analysis performed by a second qualified examiner. *See United States v. Taylor*, 663 F.Supp. 2d 1170, 1176 (D. N.M. 2009) (“Mr. Nichols testified that industry standards generally require an examiner to document in detail, through note-taking and photographs, the basis for his findings. Mr. Nichols also testified that industry standards require confirmation by at least one other examiner when the first examiner reaches an identification.”).

See also United States v. Monteiro, 407 F.Supp.2d 351, 368 (D. Mass. 2006) (same); *United States v. Diaz*, 2007 WL 485967 at *5 (N.D. Cal. 2007) (same).

B. Applicable Standard

The parties' (seemingly) sole point of agreement on the matter is that the Court's determination regarding the admissibility or inadmissibility of Ms. Moynihan's testimony is governed by Fed. R. Evid. 702, as well as *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993) and its progeny. *See United States v. White*, 309 F. App'x 772, 774–75 (4th Cir. 2009) ("The admission of expert witness testimony is controlled by Rule 702 of the Federal Rules of Evidence and the Supreme Court's decision in *Daubert*."). Fed. R. Evid. 702 codifies the standard for admissibility of an expert witness, as explained by *Daubert* and *Kumho Tire*, and provides that

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. *See Nease v. Ford Motor Co.*, 848 F.3d 219, 230 (4th Cir. 2017), *cert. denied*, 137 S. Ct. 2250, 198 L. Ed. 2d 680 (2017) ("The *Kumho* Court concluded that Rule 702 'applies to all expert testimony' as its 'language makes no relevant distinction between 'scientific' knowledge and 'technical' or 'other specialized' knowledge. It makes clear that any such knowledge might become the subject of expert testimony.") (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141, 147 (1999) ("This case requires us to decide how *Daubert* applies to the testimony of engineers and other experts who are not scientists.")). Fourth Circuit

case law has interpreted *Daubert* to involve a two-part test which must be satisfied to admit expert witness testimony under Rule 702:

(1) the expert testimony must consist of ‘scientific knowledge’-that is, the testimony must be supported by appropriate validation; *and* (2) the evidence or testimony must ‘assist the trier of fact to understand the evidence or to determine a fact in issue.’

United States v. White, 309 F. App’x 772, 774–75 (4th Cir. 2009) (quoting *United States v. Dorsey*, 45 F.3d 809, 813 (4th Cir. 1995) (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 591 (1993))) (italics in original). The Court finds that Ms. Moynihan’s proffered testimony regarding firearms toolmark examination involves a *technical* specialty, as opposed to a scientific one. See *United States v. Willock*, 696 F. Supp. 2d 536 (D. Md. 2010), *aff’d sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (holding that firearms examination was not “scientific” based on two different reports calling into question the reliability, but such expert testimony was still admissible because it was “technical” or “specialized”); *United States v. Glynn*, 578 F. Supp. 2d 567 (S.D.N.Y. 2008) (determining that although firearm toolmark examination is not a science, it is a field that is ripe for expert testimony because it is “technical” or “specialized”); *United States v. Monteiro*, 407 F.Supp.2d 351 (D. Mass. 2006) (concluding that toolmark examination evidence is not necessarily a science, but is still generally admissible as an expert field). This distinction (between scientific versus technical) does not alter the standard used by the Court in considering whether to accept Ms. Moynihan’s expert testimony. See *Nease v. Ford Motor Co.*, 848 F.3d 219, 230 (4th Cir. 2017), *cert. denied*, 137 S. Ct. 2250, 198 L. Ed. 2d 680 (2017) (observing that “the Supreme Court made clear more than 17 years ago in *Kumho Tire* that *Daubert* was not limited to the testimony of scientists but also applied ‘to testimony based on ‘technical’ and ‘other specialized’ knowledge’”) (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999)).

C. Discussion

As previously stated, Defendants seek to preclude the Government from presenting the expert testimony of Ms. Moynihan in support of the Government's case theory that after murdering victim Altariq Tynes, Co-Defendant Foye

stole Tynes' .380 semi-automatic handgun and gave it to [D]efendant Mitchell. That the same .380 firearm fired bullets and left casings at many of the same crime scenes as Foye's .40 Glock, during time periods when phone evidence and witness testimony place Foye and Mitchell together at or near those crime scenes, is strongly probative of guilt.

ECF No. 186 at 10. In support of their Motion to Exclude, Defendants assert several arguments, which the Court will address separately.

1. *Qualifications*

To the extent that Defendants mount a threshold challenge to the admissibility of Ms. Moynihan's testimony based on her qualifications, the Court is unpersuaded. *See* ECF No. 266 at 2 ("She also purports to be an expert at discerning patterns, again based on her training, which is described as intensive but about which the United States presented no details, no training records, or any other type of documentation in its effort to qualify [Ms. Moynihan] to render expert opinions."). This is an inaccurate characterization of Ms. Moynihan's hearing testimony and of the information provided in the Government's filings prior to the hearing, and specifically the Government's Opposition to the instant Motion to Exclude (ECF No. 186). During the hearing, Ms. Moynihan testified *at length* about her professional qualifications, including, but not limited to her May 2006 graduation from West Virginia University with a bachelor of science in Forensic and Investigative Science, the intensive two year training program she completed in 2008, her membership in the AFTE, and her ATFE certified status. *See* ECF No. 264 at 20:13-25 to 31:1-15. Additionally, the Government offered and the Court received

(without Defense objection) Ms. Moynihan's curriculum vitae in evidence as Government Exhibit 4. *See* ECF No. 264 at 31:4-15. *See also* ECF No. 186 at 9. Defense counsel used Government Exhibit 4 while cross-examining Ms. Moynihan to inquire about her specific training. *See* ECF No. 264 at 264 at 99:21-25 to 103:1-6.

2. *Unreliability/Subjectivity*

The central thrust of Defendants' argument for excluding Ms. Moynihan is that the field of firearms toolmark examination is entirely subjective, and thus, inherently unreliable. *See* ECF No. 266 at 1. In support of this argument, Defense counsel attached to his pleadings and supplemental briefing hundreds of pages worth of reports, memoranda, and case law suggesting the fallibility and purported unreliability of the firearms examination discipline. Additionally, during the December 11, 2017 hearing, Defense counsel cross-examined Ms. Moynihan at length about the subjective nature of her work.

The Government concedes that the AFTE theory of identification is subjective in nature because of the significance each individual examiner affords to a given pattern. *See* ECF No. 282 at 11. During her testimony, Ms. Moynihan repeatedly acknowledged the subjective element of the work. *See e.g.*, ECF No. 262 at 58:15-20; *id.* at 59:2-5 ("The only part of this examination that is subjective is to what significance I give the patterns -- or the agreement in the patterns of marks. So the decision of individualization is subjective and it is based on my training and experience."). However, as the Government notes, the individualized and admittedly subjective elements of toolmark examination do not operate to bar the admissibility thereof. *See* ECF No. 282 at 7 ("Certainly the use of a trained human 'eye' and 'brain,' as opposed to a purely metrological or computational process, does not by definition preclude testimony from being expert testimony."). Indeed, the Court finds that all technical fields which require the

testimony of expert witnesses engender *some* degree of subjectivity requiring the expert to employ his or her individual judgment, which is based on specialized training, education, and relevant work experience. Thus, the presence of a subjective element in a technical expert's field does not operate as an automatic bar to admissibility; rather, "[a]ccording to *Daubert*, 'a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested.'" *Nease v. Ford Motor Co.*, 848 F.3d 219, 231 (4th Cir. 2017), *cert. denied*, 137 S. Ct. 2250, 198 L. Ed. 2d 680 (2017) (quoting *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 593 (1993)). The Court finds that in the instant case, both requirements are met by Ms. Moynihan's proffered testimony.

In the broadest sense, the ATFE theory of identification has been subjected to nationwide testing, as evidenced by the standards promulgated by ATFE and case law on the subject. This ATFE theory of identification requires examiners to observe and document with specificity the presence of observable physical characteristics on ammunition components according to criteria established by the ATFE. Specific to this case, Ms. Moynihan testified that pursuant to ATFE protocol and DFS laboratory standard operating procedures, whenever an examiner concludes that there is an "identification," or conclusion of a match, that two bullets were fired from the same weapon, a second certified examiner performs his or her own independent analysis to determine whether the same conclusion is reached. *See* ECF 264 at 62:13-15 ("In fact, all of our identifications at the laboratory require a verification by a second qualified examiner."). *See also* ECF No. 186 at 10 ("The [DFS] laboratory is accredited by the American Society of Crime Lab Directors Laboratory Accreditation Board and has been since 1989. . . . DFS's firearms and toolmarks training and procedures manuals are publicly available The laboratory's policy, in line with AFTE guidelines, requires all identifications of matches, and all eliminations of

matches based on individual characteristics, to be verified by a second examiner.”).

Defendants’ supplemental briefing relies heavily on the concurring opinion of the Honorable Catharine Friend Easterly in *Williams vs. United States*, a 2016 case from the District of Columbia Court of Appeals. 130 A.3d 343 (2016). See ECF No. 266 at 3-4 (“The entire case is illustrative of the problem with the admission toolmark [sic] examiner testimony, but the concurring opinion by Judge Catharine [sic] Easterly . . . is particularly compelling.”). In *Williams*, a jury convicted the defendant of first degree felony murder while armed, attempt to commit robbery while armed, two counts of possession of a firearm during a crime of violence, and carrying a pistol without a license, for the defendant’s involvement in the shooting death of a victim to which there were no eyewitnesses, and the prosecution’s case relied almost exclusively on forensic evidence. 130 A.3d at 345. On appeal, the defendant argued that although he failed to object to the testimony during trial, the trial court erred by permitting the firearms and toolmark examiner to testify that the “the markings on the bullets recovered from [the victim’s] Escalade were unique or that he was without ‘any doubt’ that these bullets were fired from the gun found in [the defendant’s] room.” *Id.* at 347. In light of *Williams*’ failure to object during trial, the Court of Appeals reviewed the propriety of the testimony only for plain error. *Id.* Applying this standard, the *Williams* Court concluded that

[s]ince Mr. Williams has not shown that the state of the law is such that the trial court plainly should have *sua sponte* precluded or struck the certainty statements of the firearms and toolmark examiner in this case, Mr. Williams’s unpreserved challenge to those certainty statements cannot prevail under our test for plain error.

Id. at 349. In arriving at this conclusion, the Court of Appeals reviewed the pertinent binding case law and found “[t]here is no precedent in this jurisdiction that limits a toolmark and firearms examiner’s testimony about the certainty of his pattern-matching conclusions.” *Williams v.*

United States, 130 A.3d 343, 348-49 (2016). The *Williams* Court also observed that “the closet this court has come to addressing this issue was in (*Ricardo*) *Jones v. United States*, 27 A.3d 1130 (D.C. 2011), wherein the Court of Appeals held that the trial court committed harmless error when it “assumed without deciding, that such experts should not be permitted to testify that they are 100% certain of a match, to the conclusion of all other firearms.” *Id.* at 348 (quoting *Ricardo Jones v. United States*, 27 A.3d 1130, 1139 (D.C. 2011)). The *Williams* Court also looked to courts outside the jurisdiction for guidance, stating “[n]or can we say that the weight of non-binding authority outside this jurisdiction is a sufficient foundation for a determination that the trial court ‘plainly’ erred.” *Williams*, 130 A.3d at 348. Writing separately in a concurrence, Judge Easterly was extremely critical of the field of firearms and toolmark examination, observing that

[a]s matters currently stand, a certainty statement regarding toolmark pattern matching has the same probative value as the vision of a psychic: it reflects nothing more than the individual’s foundationless faith in what he believes to be true. This is not evidence on which we can in good conscience rely, particularly in criminal cases, where we demand proof – *real* proof – beyond a reasonable doubt, precisely because the stakes are so high.

Williams v. United States, 130 A.3d 343, 355 (2016) (Easterly, J., concurring) (*italics in original*). While an eloquent articulation of Defendants’ reliability concerns regarding firearm and toolmark examination, Judge Easterly’s concurrence is not binding authority on this Court.

Furthermore, the factual events of *Williams*’ trial giving rise to Judge Easterly’s ire are wholly distinguishable from the proffered testimony of Ms. Moynihan in this case. In *Williams*, the firearms and toolmark examiner stated his conclusions unequivocally, and with absolute certainty. *See Williams*, 130 A.3d at 346 (testifying that there was no doubt in his mind that the bullets recovered from the victim’s vehicle were fired from the gun found in the defendant’s

room). Indeed, the prosecution in *Williams* *conceded* the impropriety of allowing its expert to provide such unequivocal certainty statements. *See Williams*, 130 A.3d at 354 (“The government states in its brief to this court that it is ‘regrettable’ that its expert was permitted to state his pattern-matching conclusion with absolute certainty.”). Here, the Government maintained in its initial briefing and continues to maintain that it will not attempt to elicit any unwarranted certainty statements (such as “absolute certainty”) from Ms. Moynihan, nor will it instruct her to provide such a certainty characterization during cross-examination. ECF No. 282 at 17-18. The Government has suggested as appropriate such statements of certainty as “given her training, experience, and knowledge of the field, combine with requirement that all identifications be verified by a second examiner, her opinion is that the likelihood that another tool could have produced an identified toolmark is so low as to be a practical, but not absolute, impossibility.” *Id.* at 18. Alternatively, the Government suggests that if asked, Ms. Moynihan would qualify the certainty of her conclusions “with a phrase similar to ‘a reasonable degree of certainty in the ballistics field.’” *Id.* at 18 n.3.³ The Court finds the Government’s latter suggestion to be a more appropriate certainty characterization than the former and one that is supported by the standard accepted by other courts who have considered the issue. *See United States v. Willock*, 696 F. Supp. 2d 536, 572–73 (D. Md. 2010), *aff’d sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (“Based on the materials that I have reviewed and the testimony at the hearing, I find that there is no meaningful distinction between a firearms examiner saying that ‘the likelihood of another firearm having fired these cartridges is so remote as to be considered a

³ *See United States v. Willock*, 696 F. Supp. 2d 536, 561 n.10 (D. Md. 2010), *aff’d sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (“The term ‘ballistics’ is a misnomer if used to describe bullet or cartridge identification. ‘Ballistics is the study of flying projectiles, including bullets. Toolmark analysis, the technique used in this case, involves the study of marks made by tools, such as the marks a gun imprints on bullets or shell casings.’”) (quoting *United States v. Green*, 405 F.Supp.2d 104, 118 (D. Mass. 2005)).

practical impossibility’ and saying that his identification is ‘an absolute certainty.’”).

Accordingly, the Court recommends that so long as the Government can establish that Ms. Moynihan followed industry standards, to wit: documented, in detail, her conclusions in writing and photographs; she did not rely on any undisclosed examiner opinions; and that her conclusions were confirmed by at least one other examiner, and she does not attempt to make outlandish or unsupported pronouncements about her degree of certainty as to her identification conclusions, then there should be no barrier to admissibility, and Ms. Moynihan should be allowed to express her opinions “to a reasonable degree of ballistic or technical certainty” (or any other version of that standard).

3. *Bias*

Defendants also argue that Ms. Moynihan’s conclusions are tainted by confirmation bias. ECF No. 266 at 4-5. Specifically, Defendants contend that Ms. Moynihan

essentially became part of the law enforcement team from the outset of the case. She was told that numerous cases were connected, was congratulated by the prosecution for her work in other cases, had numerous detailed conversation [sic] with prosecutors and law enforcement agents about the status of the investigation, nature of the crimes, and need to link the various items of evidence to each other.

ECF No. 266 at 5. In support of this argument, Defendants submitted Defense Exhibit 2 which is a compilation of email correspondences between Ms. Moynihan, Assistant United States Attorneys, and federal and state law enforcement agents regarding this case, as well as DFS memoranda documenting telephone calls and actions taken by Ms. Moynihan in performing forensic analyses of the bullet and shell casing evidence. *See* Defense Hearing Exhibit 2, ECF No. 258, attach. 1 and ECF No. 259, attach. 1. Upon Defense counsel’s questioning, Ms. Moynihan testified to her understanding of cognitive bias and its potential application to her work, as well as the steps taken to deliver impartial, reliable conclusions. *See* ECF No. 264 at

102:18-25 to 109:1-6 (“Cognitive bias is when a person is biased by the context of a particular situation, and it may affect your decision-making. Cognitive bias can happen in the laboratory, and in some ways including knowing more information about the case than is necessary to conduct your examination. At the Department of Forensic Science, along with training in cognitive bias, we have various ways to prevent an examiner being biased by certain information, and that would include following standard operating procedures, having a thorough technical review of all case files, as well as having a second qualified examiner come to verify any identification results.”).

The Court finds that consideration of Ms. Moynihan’s alleged pro-Government bias rests squarely within the purview of the jury, as a question of weight and credibility, rather than admissibility in the Court’s role as gatekeeper. *See JFJ Toys, Inc. v. Sears Holdings Corp.*, 237 F. Supp. 3d 311, 324 (D. Md. 2017) (“Generally, ‘an expert witness’s bias goes to the weight, not the admissibility of the testimony, and should be brought out on cross-examination.’”) (citing *Glass v. Anne Arundel Cty.*, 38 F.Supp.3d 705, 715 (D. Md. 2014); *Pulse Med. Instruments, Inc. v. Drug Impairment Detection Servs., LLC*, 858 F.Supp.2d 505, 515 (D. Md. 2012) (citing 29 Charles A. Wright & Victor J. Gold, *Federal Practice and Procedure* § 6265 (2011) (“Alleged bias is ordinarily a question of credibility, not admissibility.”))). *See also In re: Lipitor (Atorvastatin Calcium) Mktg., Sales Practices & Prod. Liab. Litig.*, No. 2:14-MN-02502-RMG, 2016 WL 2940784, at *5 (D.S.C. May 6, 2016) (rejecting a bias-challenge to the admissibility of an anti-pharmaceutical expert because “it is well-established that an expert’s bias is not a proper basis to bar testimony under *Daubert*”) (quoting *Cage v. City of Chicago*, 979 F. Supp. 2d 787, 827 (N.D. Ill. 2013) (collecting cases); citing *Adams v. Lab. Corp. of Am.*, 760 F.3d 1322, 1332 (11th Cir. 2014) (“Bias in an expert witness’s testimony is usually a credibility issue for the

jury.”); *DiCarlo v. Keller Ladders, Inc.*, 211 F.3d 465, 468 (8th Cir. 2000) (“Determining the credibility of a witness is the jury’s province, whether the witness is lay or expert, and an expert witness’s bias goes to the weight, not the admissibility of the testimony, and should be brought out on cross-examination.”) (citations omitted)).

4. *Absence of a “Known” Firearm*

Defendants also challenge Ms. Moynihan’s ability to present reliable conclusions without having the firearm used to fire the bullets she examined. ECF No. 266 at 3. The Court finds this argument unpersuasive because the factual underpinnings of this argument were addressed during Ms. Moynihan’s testimony. Ms. Moynihan explained that her work is concerned with matching components to components, namely, bullets to bullets and shell casings to shell casings. An “identification” is an examiner’s conclusion that two components were fired by the same weapon, “[a]nd an identification happens between the implements themselves, the cartridge cases or the bullets themselves, not between a bullet and a gun or a cartridge case and a gun.” ECF No. 264 at 61:19-25. Therefore, the presence or absence of a known weapon does not affect Ms. Moynihan’s ability to conclude that a match exists between two fired components.

D. Conclusion

Defendants concede, as they must, that no court has ever *totally* rejected firearms and toolmark examination testimony.⁴ See ECF No. 266 at 3 (“The defense is well aware that no Court has yet excluded in total testimony from a toolmark examiner . . .”). This Court’s survey of federal courts in our sister circuits indicates that firearms and toolmark examination has and

⁴ Within the past five years, the closest a court has come to outright rejection of firearms and toolmark examiner expert testimony is Judge Easterly’s exhortation of the subjective certainty statement of the firearms examiner in *Williams v. United States*, 130 A.3d 343, 351-55 (D.C. 2016) (Easterly, J., concurring). Other courts have addressed or noted growing criticism of the field, and in so doing, have limited the expert’s certainty statement opinion matching a particular firearm to recovered projectiles or cartridge casings to a “reasonable degree of ballistic certainty.” *Com. v. Pytou Heang*, 458 Mass. 827, 850, 942 N.E.2d 927, 947 (2011).

continues to be routinely accepted by courts pursuant to Fed. R. Evid. 702, *Daubert*, and its progeny, albeit with some limitations regarding statements of certainty and the requirement that certain prerequisites be satisfied. *See e.g., United States v. Casey*, 928 F. Supp. 2d 397 (D.P.R. 2013) (declining to follow sister courts who have limited expert testimony based on the 2008 and 2009 NAS reports and finding that the Committee(s) who authored such reports specifically stated that the purpose of the reports was not to weigh in on admissibility of firearm toolmark evidence) and encouraging a return to the previous tradition of unfettered admissibility of a firearm examiner's expert testimony without qualification of the expert's degree of certainty); *United States v. Taylor*, 663 F. Supp. 2d 1170 (D.N.M. 2009) (holding that expert could testify, in his opinion, using pattern-based methodology, if such methodology was subject to peer review, that the bullet came from suspect rifle to within "reasonable degree of certainty in the firearms examination field"); *United States v. Glynn*, 578 F. Supp. 2d 567 (S.D.N.Y. 2008) (determining that although firearm toolmark examination is not a science, it is a field that is ripe for expert testimony because it is "technical" or "specialized" and the level of certainty could be expressed as "more likely than not" but nothing more); *United States v. Diaz*, 2007 WL 485967 (N.D. Cal. 2007) (permitting the firearms examiner to testify, but could only testify that a particular bullet or cartridge case was fired from a firearm to a "reasonable degree of certainty in the ballistics field"); *United States v. Monteiro*, 407 F.Supp.2d 351 (D. Mass. 2006) (stating that the appropriate standard is "reasonable degree of ballistic certainty"). For reasons detailed herein, the Court declines Defendants' invitation to depart from this long-standing tradition favoring admissibility.⁵

⁵ At the December 11, 2017 Hearing, the Court engaged in the following exchange with Mr. Lawrence Woodward, Jr., counsel for Defendant Mitchell:

II. RECOMMENDATIONS

Accordingly, and upon consideration of Defendant Mitchell's Motion to Exclude Bullets and Shell Casings and memorandum of law in support (ECF Nos. 137-38), the Government's Opposition (ECF No. 186), Defendant's Reply (ECF No. 214), oral argument of both parties, the testimony of Ms. Therese Moynihan, and the post-hearing supplemental briefings of the parties (ECF Nos. 266, 282), the undersigned recommends that Defendant Mitchell's Motion to Exclude Bullets and Shell Casings (ECF No. 137) be **DENIED**. Additionally, the undersigned recommends that the Government's proffered firearm and toolmark examiner be permitted to express her opinions "to a reasonable degree of ballistic or technical certainty" (or any other version of that standard), rather than to a "practical impossibility."

III. REVIEW PROCEDURE

By receiving a copy of this Report and Recommendation, the parties are notified that:

1. Any party may serve on the other party and file with the Clerk of this Court specific written objections to the above findings and recommendations within fourteen days from the date this Report and Recommendation is mailed to the objecting party, *see* 28 U.S.C. § 636(b)(1)(C) and Fed. R. Civ. P. 72(b), computed pursuant to Fed. R. Civ. P. 6(a). A party may respond to another party's specific written objections within fourteen days after being served with a copy thereof. *See* 28 U.S.C. § 636(b)(1); Fed. R. Civ. P. 72(b).


2. The United States District Judge shall make a *de novo* determination of those portions of this Report and Recommendation or specified findings or recommendations to which

THE COURT: I'm really trying to drill down and determine whether you're asking this Court to become, apparently, the first in the nation to say that ballistic evidence should not be admissible because the science or the -- if it's not a science, the specialty is not reliable, is not testable, is not properly reviewable. Is that what you're asking this Court to do?

MR. WOODWARD: I am asking this Court to do that, Your Honor.

objection is made. The parties are further notified that failure to file timely specific written objections to the above findings and recommendations will result in a waiver of the right to appeal from a judgment of this Court based on such findings and recommendations. *Thomas v. Arn*, 474 U.S. 140 (1985); *Carr v. Hutto*, 737 F.2d 433 (4th Cir. 1984), *cert. denied*, 474 U.S. 1019 (1985); *United States v. Schronce*, 727 F.2d 91 (4th Cir. 1984), *cert. denied*, 467 U.S. 1208 (1984).

The Clerk is **DIRECTED** to forward a copy of this Report and Recommendation to all counsel of record.



Lawrence R. Leonard
United States Magistrate Judge

Norfolk, Virginia
January 12, 2018